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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,649	02/03/2004	Hartmut Ahrens	514413-3945	3687

7590 12/21/2010

FROMMER, LAWRENCE & HAUG LLP
745 Fifth Avenue
New York, NY 10151

EXAMINER
BALASUBRAMANIAN, VENKATARAMAN

ART UNIT	PAPER NUMBER
1624	

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12/21/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/771,649	AHRENS ET AL.	
	Examiner	Art Unit	
	/Venkataraman Balasubramanian/	1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 11-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission, which included presentation of same set of previously presented claims and arguments, filed on 11/05/2010 has been entered. Claims 1-6 and 11-20 are pending.

In view of applicants' response, the following rejections made in the previous office action are maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al., EP 0864567.

Saito et al. teaches several diaminosubstituted triazine compounds, composition, process of making and method of use as herbicides, which include compound, composition, process and method of use claimed in the instant claims. Saito et al., does not teach all the compounds generically embraced in Formula I, with various X, Y and R choices. However, Saito et al. teaches equivalency of exemplified compounds with those generically claimed. Thus it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds variously substituted in triazine ring as permitted by the reference and expect resulting compounds (instant compounds) to possess the uses taught by the art in view of the equivalency teaching outline above.

This rejection is same as made in the previous office action. Applicants' traversal to overcome this rejection is not persuasive. Applicants have argued that 1) While the

Saito and Lorenz generically refer to compounds with some structural similarity to the applicants claimed compounds, neither reference refers to the specific stereochemistry required at the 1 position of the compound, i.e. 1 (R), nor does it require the level of stereochemical purity required by the claim 60 to 100% (R), 2) Both Saito and Lorenz are even further removed from the applicant's claimed invention when additional chiral centers are identified, e.g. see claims 17 and 18 where two stereochemical centers are present.

Both of these arguments are not persuasive. Contrary to applicants urging, Saito teaches several compounds (at least 100 compounds) which fall within the instant genus. See pages 11 through 44 for exemplified compounds. Contrary to applicants urging, the exemplified 100 compounds in the racemate forms would obvious and would definitely provide guidance to make the rest of the genus of Saito. Saito is silent about the chirality. But even if each compound is a racemate and does not meet the 60-100 % sterochemical purity as asserted by the applicants, they amount two compounds and it is within the skill set of one trained in the art to resolve the optical isomers using known processes.

To elaborate further, Saito uses bicyclicamine for making the triazine compounds without resolving them to optically pure or sterochemically pure amine. Instant invention uses chiral bicyclicamine or stereochemically pure bicyclicamine for making the said triazine. Chiral bicyclic amines derived from the bicyclicamine used in Saito are known in the art at the time of instant invention. See instant IDS. Furthermore, resolution and separation of stereoisomers are also known in the art. Hence, it is within the skill set of

one trained in the art to substitute the bicyclicamine of unknown chirality or stereoisomer with chiral bicyclicamine with desired optical purity and stereochemistry.

Furthermore, there is no showing that 60-100 % sterochemical purity embraced in the instant invention alone offers unexpected/superior results. Saito teaches all his compounds have the desired properties.

Applicants' second argument noted above lacks factual support. First of all, Saito's compounds include groups bearing chiral center at the 4 or 6-postion. Secondly, there is no showing that 1R, 1*S or 1R, 1*R group embraced in the instant invention alone offers unexpected/superior results. Thirdly not all compounds embraced in instant claims have a chiral center at 1* position.

Applicants have also argued in that "neither Saito nor Lorenz represents a finite number of identifiable predictable solutions when applied to the problem of identifying a specific stereoisomer. Given the breadth of possible moieties from Saito/Lorenz, there was virtually an infinite number of stereoisomers possible with no direction given to those claimed by the applicants".

This argument lacks factual support. As pointed out above, the compounds taught by Saito meets each and every element of instant claims except the purity limitation. Each of these compounds have two isomers in 1:1 ratio (50% purity) and separation of these two and arrive at various isomeric purities is not infinite number of predictable solutions. Hence, contrary to applicants urging, Saito represents a finite number of identifiable predictable solutions when applied to the problem of identifying a specific stereoisomer.

Hence, this rejection is proper and is maintained.

Claims 1-6 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lorenz et al. WO 97/31904 (equivalent US 6,069,114 used).

Lorenz et al. teach several 2-amino and 4-biccyloamino-1,3,5-triazines which generically include instant compounds for the same use as herbicides and plant growth regulators. See column 1, formula I and note the definition of R^1, R^2, R^3, R^4, R^5, R^6, Y^1, Y^2, Y^3 and n. Especially note when Y^1 is a direct bond, R^3 is Z^1-R^7 wherein Z^1 is a direct bond and R^7 is hydrogen, the compounds taught by Lorenz et al. include instant compounds. See column 1-13 for various preferred embodiments. See also the process of making shown on column 13-20, which include the same as claimed in the instant claims. See Table I, 25-52, examples 1-658 for compounds made. Especially see compound 158, compounds 258 & 267, compound 284, compound 336, compound 388, compound 440, compound 492 and compound 590. Note all these compounds have a methyl group in the 6-position of the triazine. Also see column 5, lines 10-21 wherein Lorenz teaches these compounds exist as stereoisomers and they can be separated or synthesized using stereochemically pure starting materials.

Lorenz et al teaches equivalency of the exemplified compounds shown in Table with those generically claimed for compound of formula I. See page 2 formula I and note the definition of R^1, R^2, R^3, R^4, R^5, R^6, Y^1, Y^2, Y^3 and n. Especially note when Y^1 is a direct bond, R^3 is Z^1-R^7 wherein Z^1 is a direct bond and R^7 is hydrogen, the compounds taught by Lorenz et al. include instant compounds.

Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds variously substituted in the triazine ring including various bicycloamino group at 4-postion and arrive at any isomeric purity as permitted by the reference and expect resulting compounds to possess the uses taught by the art in view of the equivalency teaching outline above.

Thus it would have been obvious to one skilled in the art at the time of the invention was made to expect instant compounds to possess the utility taught by the applied art in view of the close structural similarity outlined above.

This rejection is same as made in the previous office action. Applicants' traversal to overcome this rejection is not persuasive. Applicants have argued that 1) While the Saito and Lorenz generically refer to compounds with some structural similarity to the applicants claimed compounds, neither reference refers to the specific stereochemistry required at the 1 position of the compound, i.e. 1 (R), nor does it require the level of stereochemical purity required by the claim 60 to 100% (R), 2) Both Saito and Lorenz are even further removed from the applicant's claimed invention when additional chiral centers are identified, e.g. see claims 17 and 18 where two stereochemical centers are present.

Both of these arguments are not persuasive as noted in the above rebuttal under Saito which is incorporated herein. Contrary to applicants urging, Lorenzo teaches several compounds (at least 658 compounds) which fall within the instant genus. See pages 50 through 64 for exemplified compounds. Contrary to applicants urging, the exemplified 658 compounds in the racemate forms would be obvious and would

definitely provide guidance to make the rest of the genus of Lorenzo. Lorenzo is silent about the chirality. But even if each compound is a racemate and does not meet the 60-100 % sterochemical purity as asserted by the applicants, they amount two compounds and it is within the skill set of one trained in the art to resolve the optical isomers using known processes.

To elaborate further, Lorenzo uses bicyclicamine for making the triazine compounds without resolving them to optically pure or stereochemically pure amine. Instant invention uses chiral bicyclicamine or stereochemically pure bicyclicamine for making the said triazine. Chiral bicyclic amines derived from the bicyclicamine used in Lorenzo are known in the art at the time of instant invention. See instant IDS. Furthermore, resolution and separation of stereoisomers are also known in the art. Hence, it is within the skill set of one trained in the art to substitute the bicyclicamine of unknown chirality or stereoisomer with chiral bicyclicamine with desired optical purity and stereochemistry.

Furthermore, there is no showing that 60-100 % sterochemical purity embraced in the instant invention alone offers unexpected/superior results. Lorenzo teaches all his compounds have the desired properties.

Applicants' second argument noted above lacks factual support. First of all, Lorenzo permits group bearing chiral center at the 4 or 6-postion. Secondly, there is no showing that 1R, 1*S or 1R, 1*R group embraced in the instant invention alone offers unexpected/superior results. Thirdly not all compounds embraced in instant claims have a chiral center at 1* position.

Applicants have also argued in that "neither Saito nor Lorenz represents a finite number of identifiable predictable solutions when applied to the problem of identifying a specific stereoisomer. Given the breadth of possible moieties from Saito/Lorenz, there was virtually an infinite number of stereoisomers possible with no direction given to those claimed by the applicants".

This argument lacks factual support. As pointed out above, the compounds taught by Lorenz meets each and every element of instant claims except the purity limitation. In column 5, lines 10-21, Lorenz also teaches these compounds exist as stereoisomers and they can be separated or synthesized using stereochemically pure starting materials. Each of these compounds have two isomers and separation of these two and arrive at various isomeric purities is not infinite number of predictable solutions. Hence, contrary to applicants urging, Lorenz represents a finite number of identifiable predictable solutions when applied to the problem of identifying a specific stereoisomer.

Hence, this rejection is proper and is maintained.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following rejection is made in the previous office action. Applicants have not addressed this rejection in paper filed on 07/07/2009:

Claims 1-6 and 11-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/733,337. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter, namely, the amino-bycycloaminotriazine, composition and method of use claimed in the instant claims overlap with the subject matter, namely, the amino-bycycloaminotriazine, composition and method of use claimed in the copending application 11/733,337. The compounds of copending application has difluoromethyl in the triazine ring which is also claimed in the instant invention. Thus, it would have been obvious to one skilled in the art at the time of the invention was made to make the subgenus of compounds of the copending application that is instant compounds and expect them to be herbicides.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

This rejection is same as made in the previous office action. Applicants' traversal is not persuasive.

Applicants have argued that the copending application requires a CHF_2 group in the triazine ring and such is not the case with instant claims. That is incorrect. Instant R^1, R^2 and R^3 definition permits a CHF_2 group in the triazine ring there by includes the subgenus of compounds of the copending application 11/733,337.

Applicants' have also argued that the stereochemistry requirement of instant claims is not met with in the copending application 11/733,337. That is again incorrect. Claims 4-11 of the copending application clearly recites the specific stereochemistry requirement.

Hence, based on these factual considerations, the rejection is proper.

Applicants have argued that the instant application has earlier filing date and hence can be allowed. However, it appears the examination/prosecution of the copending application 11/733,337 has advanced considerably and hence this rejection is maintained. However, if this application were found to be allowable earlier, examiner will withdraw the rejection and allow this application.

Conclusion

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any

inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

/Venkataraman Balasubramanian/

Primary Examiner, Art Unit 1624